IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Rakib, et al.	Art Unit:	2664
		Examiner:	Unknown
Serial No.:	09/764,739	Docket No:	TER-002.3P D6
Filed:	1/16/2001		

For: APPARATUS AND METHOD FOR TRELLIS ENCODING DATA FOR TRANSMISSION IN DIGITAL DATA TRANSMISSION SYSTEMS

Honorable Commissioner
of Patents and Trademarks
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§1.97-1.98, the undersigned would like to make the following prior art references of record in the above-identified patent application. The undersigned believes that some of these references may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

While this Information Disclosure Statement may contain material information pursuant to 37 C.F.R. §1.56, it is not intended to constitute an admission that any individual reference referred to herein is prior art to the invention disclosed and claimed in the above-identified patent application.

Each reference listed herein may be accompanied by an explanation of its relevance. While this explanation is believed to generally reflect the contents of the references which the undersigned believes a reasonable examiner might consider relevant and material to the examination of the above-identified patent application, it is not intended that the examiner rely on the description as unfailingly accurate or complete. A copy of each reference is enclosed for

the express purpose of providing the examiner with an opportunity to perform an independent evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter.

Cited Art

BACKSTROM et al., U.S. Patent 5,229,996, Filed July 21, 1992, Patent Issued July 20, 1993: Teaches a system to solve the problem of adjusting the timing in TDMA cellular systems of widening a window to look for a sync pattern from a mobile phone after a base station has given the mobile phone a timing adjustment command after a clock offset between the base station's clock and the mobile phone's clock. In the prior art, when a clock offset was noticed, the base station would send a command telling the mobile phone to adjust its timing by a certain amount. The base station would not know when to listen for the sync pattern after sending the command, so it would widen its window when synchronization patterns would be recognized to encompass not only the old timing but also the new timing. This increased the probability that a false sync pattern would be recognized since the sync pattern could occur during normal speech. This patent teaches the solution to this problem is to not widen the window to include both the old timing and the new timing but to split it into two narrow windows, one at the old timing and one at the new timing.

KAZAMA et al., *Semi-Autonomous Synchronization Among Base Stations For Tdma-Tdd Communications Systems*, 2334B IEICE Transactions on Communications, E77-B (1994) July, No. 7, Tokyo, Jp.: Teaches a method of synchronizing TDMA frames of TDMA base stations of a personal communications network such as the Japanese Handy Phone Network to each other. Specific adjacent base stations (each must know its own position) are identified by the station identifiers in control bursts. Geographical data is used to compensate for propagation delays between base stations. High resolution TDMA frame timing control is performed and each base station's clock is synchronized with the clock of the ISDM terrestial network to which each base station is attached.

van Nee, *Timing Aspects of Synchronous CDMA*, XP 000619815, PIMRC '94: Teaches reducing same-cell interference in CDMA telephone systems caused by different multipath delays for different transmitters at different locations in the same cell all transmitting to the cell's base station by either using an external time reference such as GPS satellites or synchronizing within the system itself. The latter teaching includes measuring the code delays of each received code from a remote transmitter at the base station. The base station then sends each remote transmitter its code delay. The code delay includes both the propagation delay from the remote transmitter to the base station as well as the clock offset between the base station clock and the remote transmitter clock. The base station which receives this code delay subtracts that amount from its code timing delay to reduce the offset to zero thereby reducing interference the remote transmitter causes with other stations when it transmits. The remote transmitter then synchronizes its clock to the received signal from the base station. Teaches the need for accurate time measurements to reduce interference by using wide bandwidth tracking loops and

a multipath estimating delay lock loop which improves ranging error performance by a factor of ten.

Respectfully submitted,

Dated: February 1, 2002

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C. 20231 on February 4, 2002
(Date Of Deposit)

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